54. (New) An isolated polynucleotide comprising a nucleotide sequence encoding: (a) the amino acid sequence set forth from amino acid number 1 to 273 in SEQ ID NO:65; or (b) the amino acid sequence unique to the rchd534-long protein encoded by the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.

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- 55. (New) An isolated polynucleotide comprising the nucleotide sequence: (a) set forth in SEQ ID NO:64; or (b) of the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.
- 56. (New) An isolated polynucleotide comprising the nucleotide sequence: (a) from nucleotide number 155 to 1642 set forth in SEQ ID NO:64; or (b) of the polypeptide coding sequence of the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.
- 57. (New) An isolated polynucleotide comprising the nucleotide sequence: (a) set forth from nucleotide residue number 155 to 973 set forth in SEQ ID NO:64; or (b) of the polypeptide coding sequence unique to rchd534-long protein of the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.
- 58. (New) An isolated polynucleotide consisting of a the nucleotide sequence of Claim 53.

- 59. (New) An isolated polynucleotide consisting of the nucleotide sequence of Claim 55.
- 60. (New) An isolated polynucleotide consisting of the nucleotide sequence of Claim 56.
- 61. (New) An isolated polynucleotide which hybridizes under highly stringent conditions to the nucleotide sequence of Claim 54; said highly stringent hybridization conditions consisting of hybridization to filter-bound DNA in 0.5 M NaHPO₄, 7% sodium dodecyl sulfate, 1mM EDTA at 65°C and washing in 0.1xSSC/0.1% SDS at 68°C.
- 62. (New) The isolated polynucleotide of Claim 61, wherein said isolated polynucleotide is down-regulated in endothelial cells under shear stress and encodes a protein which inhibits TGF-β signalling.
- 63. (New) An isolated polynucleotide which hybridizes under highly stringent conditions to the nucleotide sequence of Claim 56; said highly stringent hybridization conditions consisting of hybridization to filter-bound DNA in 0.5 M NaHPO₄, 7% sodium dodecyl sulfate, 1mM EDTA at 65°C and washing in 0.1xSSC/0.1% SDS at 68°C.
- 64. (New) The isolated polynucleotide of Claim 63, wherein said isolated polynucleotide is down-regulated in endothelial cells under shear stress and encodes a protein which inhibits TGF-β signalling.

- 65. (New) An isolated polynucleotide which hybridizes under highly stringent conditions to the nucleotide sequence of Claim 57; said highly stringent hybridization conditions consisting of hybridization to filter-bound DNA in 0.5 M NaHPO₄, 7% sodium dodecyl sulfate, 1mM EDTA at 65°C and washing in 0.1xSSC/0.1% SDS at 68°C.
- 66. (New) The isolated polynucleotide of Claim 65, wherein said isolated polynucleotide is down-regulated in endothelial cells under shear stress and encodes a protein which inhibits TGF-β signalling.
- 67. (New) The isolated polynucleotide of Claim 61, 62, 63, 64, 65, or 66 which is human.
 - 68. (New) The isolated polynucleotide of Claim 54, 57, 61, or 65, which is DNA.
 - 69. (New) The isolated polynucleotide of Claim 54, 57, 61, or 65, which is RNA.
 - 70. (New) A polynucleotide vector containing the polynucleotide of Claim 54, 57, 61, or 65.
 - 71. (New) A polynucleotide expression vector containing the polynucleotide of Claim 54, 57, 61, or 65, in operative association with a nucleotide regulatory element which controls expression of the polynucleotide in a host cell.
 - 72. (New) A cultured genetically engineered host cell containing the polynucleotide of Claim 54, 57, 61, or 65.

- 73. (New) A cultured genetically engineered host cell containing the polynucleotide of Claim 54, 57, 61, or 65, in operative association with a nucleotide regulatory element which controls expression of the polynucleotide in the host cell.
 - (New) The genetically engineered host cell of Claim 73 which is prokaryotic. 74.
 - 75. (New) The genetically engineered host cell of Claim 73 which is eukaryotic.
- 76. (New) A method of producing an rchd543-long polypeptide or polypeptide fragment, comprising the steps of:
 - growing the genetically engineered host cell of Claim 74 in a culture; and (a)
 - collecting the polypeptide or polypeptide fragment from the culture. (b)
- 77. (New) A method of producing an rchd543-long polypeptide or polypeptide fragment, comprising the steps of:
 - growing the genetically engineered host cell of Claim 75 in a culture; and (a)
 - (b) collecting the polypeptide or polypeptide fragment from the culture.
- 78. (New) An isolated polynucleotide consisting of at least 14 contiguous nucleotides of the nucleotide sequence from residue number 155 to 973 of SEQ ID NO:64.
- 79. (New) The polynucleotide of Claim 78, wherein said polynucleotide is at least 17 contiguous nucleotides of the nucleotide sequence from residue number 155 to 973 of SEQ ID NO:64.

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